

## REMARKS

### I. Status of the Application

Claims 15, 16, 19-22, 25, 26, 28 and 34-38 are pending in this application. In the April 6, 2006 Final Office Action, the Examiner:

A. Rejected claims 15, 16, 19-22, 25, 26, 28 and 34-38 under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement.

B. Rejected claims 15, 19-22, 25, 26, 34 and 36-38 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,573,776 to Miyamoto (hereinafter "Miyamoto") in view of U.S. Patent No. 6,229,364 to Dortu et al. (hereinafter "Dortu").

C. Rejected claims 16, 28 and 35 under 35 U.S.C. § 103(a) as allegedly being unpatentable over Miyamoto in view of Dortu in further view of U.S. Patent No. 6,208,183 to Li et al. (hereinafter, "Li").

In this response, applicants have amended claims 15 and 22. Applicants respectfully submit that the amendments place the claims in a condition for allowance. Applicants earnestly solicit reconsideration of pending claims 15, 16, 19-22, 25, 26, 28 and 34-38 in view of the foregoing amendments and the following remarks.

### II. The 35 U.S.C. § 112 Rejections Should Be Withdrawn

The Examiner has rejected claims 15, 16, 19-22, 25, 26, 28 and 34-38 under the first paragraph of 35 U.S.C. § 112 for allegedly containing limitations not disclosed in the specification and/or drawings. In particular, independent claims 15 and 22 were rejected for the limitations "a low frequency delay element" and "a high frequency delay element."

Applicant has replaced these expressions with the expression “different second delay elements in discrete steps for different frequency ranges, at least one second delay element being for low frequencies of the externally generated clock signal and at least one further second delay element being for high frequencies of the externally generated clock signal.”

The amendments to claims 15 and 22 do not constitute new matter. In particular, support for the amendments to these claims may be found in the specification on page 4, lines 19-26; page 9, lines 8-10; page 9, line 38 to page 10, line 5; page 10, lines 5-10; and page 11, lines 9-13. Because the limitations “a low frequency delay element” and “a high frequency delay element” have been deleted from the claims, it is respectfully submitted that the 35 U.S.C. § 112 rejections of claims 15, 16, 19-22, 25, 26, 28 and 34-38 should be withdrawn.

### III. Independent Claims 15 and 22 are Patentable Over the Prior Art

In the April 6, 2006 Final Office Action, the Examiner rejected independent claims 15 and 22 as being allegedly being unpatentable over Miyamoto in view of Dortu. For reasons discussed below in detail, it is respectfully submitted that obviousness rejection of claims 15 and 22, as amended, should be withdrawn.

#### A. Claim 15

Claims 15 is directed to a delay lock loop apparatus which can be adapted for use with a broad range of externally generated clock signals. The apparatus includes a delay device, a feedback device, a frequency detection device and a phase difference detection device. The delay device comprises first and second delay elements. As amended, the second delay element comprises different second delay elements for different frequency ranges. At least

one second delay element is for low frequency ranges of the clock signal, and at least one further second delay element is for high frequency ranges of the clock signal. Thus, claim 15 requires that separate delay elements be provided for different frequency ranges.

1. Combination of Miyamoto and Dortu Does Not Arrive at Claim 15

The combination of Miyamoto and Dortu does not arrive at the invention of claim 15, as amended. As mentioned above, claim 15 has been amended to include the limitation that “the second delay element comprises different second delay elements in discrete steps for different frequency ranges.” The combination of Miyamoto and Dortu fails to teach, show or suggest this limitation.

The Examiner cited Miyamoto as teaching all of the limitation of Applicant’s claim 15 except for a second delay element comprising a low frequency delay element for low clock frequencies and a high frequency delay element for high clock frequencies. To supply this limitation, the Examiner cited Dortu stating that “Dortu discloses in figure 9 and associated description a delay circuit 400 permitting delaying both low and high frequency ranges of an externally generated clock signal IN.”

However, claim 15 has been amended to clarify that the delay element for the low frequency clock signals is different than a delay element for high frequency clock signals. Dortu fails to teach the use of different delay elements for different clock frequencies. In Dortu, the *same* delay elements are used for different clock frequencies. In order to use the same delay, Dortu controls the supply voltage to the delay element, allowing them to be adjusted for different clock frequencies. (Dortu, col. 6, lines 5-20). For instance, two or more discrete voltages may be set, wherein a first voltage corresponds to a first frequency and a

second voltage corresponds to a second frequency. (Id.). There is no disclosure in Dortu of the use of different delay elements for the different frequencies. Moreover, as the Examiner stated, Miyamoto does not disclose the use of high and low frequency delay elements. Therefore, Miyamoto fails to teach the use of different delay elements for different frequencies as well.

Furthermore, Dortu teaches away from using different delay elements for different clock frequencies. For instance, Dortu states that “by altering a supply voltage to the delay elements in a delay line, delay may be adjusted without altering the elements.” (Dortu, col. 4, lines 25-28). Thus, Dortu teaches that by altering the supply voltage, the delay may be adjusted for different frequencies without having to use different elements for each frequency.

Accordingly, because the combination of Miyamoto and Dortu fails to teach, show or suggest the limitation that “the second delay element comprises different second delay elements in discrete steps for different frequency ranges,” a prima facie case of obviousness has not been established with respect to claim 15. Therefore, Applicant respectfully submits that the obviousness rejection of claim 15 should be withdrawn.

B. Claim 22

Claim 22 has been amended to include similar limitations to claim 15. In particular, claim 22 has been amended to include the limitation that the second delay element comprises different second delay elements for different frequencies. Thus, for at least the reasons discussed above with respect to claim 15, the combination of Miyamoto and Dortu does teach, show or suggest the limitation that the second delay element comprises different second delay

elements for different frequencies. Accordingly, a prima facie case of obviousness has not been established with respect to claim 22 and the rejection should be withdrawn.

IV. Dependent Claims 16, 19-21, 25, 26 and 34-38

In the April 6, 2006 Final Office Action, the Examiner rejected dependent claims 16, 19-21, 25, 26, 28 and 34-38 as being allegedly being unpatentable over Miyamoto in view of Dortu or over Miyamoto in view of Dortu in further view of Li. Claims 16, 19-21, 25, 26, 28 and 34-38 depend from and incorporate all the limitations of one of independent claims 15 or 22. As set forth above, it is respectfully submitted that independent claims 15 and 22 are allowable over Dortu and Miyamoto.

Even if Dortu and/or Miyamoto were modified with the teachings of Li as proposed by the Examiner the resulting modification would not address the deficiencies of Dortu and Miyamoto with respect to underlying claims 15 and 22.

Accordingly, it is also respectfully submitted that dependent claims 16, 19-21, 25, 26, 28 and 34-38 are also allowable for at least the same reasons that independent claims 15 and 22 are allowable.

V. Conclusion

Applicant respectfully requests entry of the amendment and favorable consideration of the application. A prompt and favorable action on the merits is requested.

Respectfully Submitted,



September 6, 2006

Harold C. Moore  
Attorney for Applicant  
Attorney Registration No. 37,892  
Maginot, Moore & Beck  
Chase Tower  
111 Monument Circle, Suite 3250  
Indianapolis, IN 46204-5109  
Telephone: (317) 638-2922